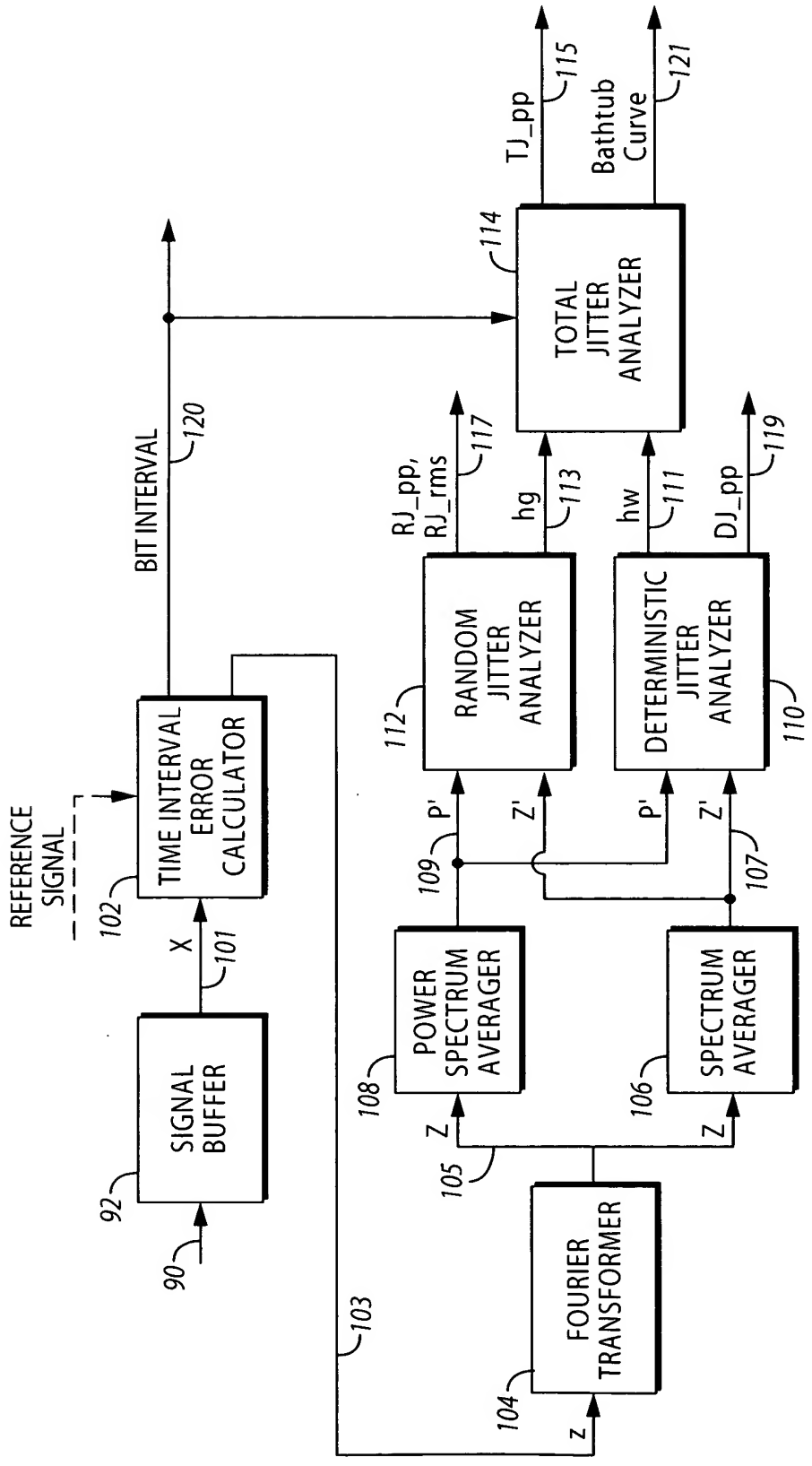
REFERENCE SIGNAL
TIME INTERVAL ERROR CALCULATOR
102
SIGNAL BUFFER
92
90
X
101
BIT INTERVAL
120
103
FOURIER TRANSFORMER
104
z
POWER SPECTRUM AVERAGER
108
SPECTRUM AVERAGER
106
Z
105
Z
P'
109
Z'
107
RANDOM JITTER ANALYZER
112
DETERMINISTIC JITTER ANALYZER
110
P'
Z'
RJ_pp, RJ_rms
117
hg
113
hw
111
DJ_pp
119
TOTAL JITTER ANALYZER
114
TJ_pp
115
Bathtub Curve
121
100

FIG. 1

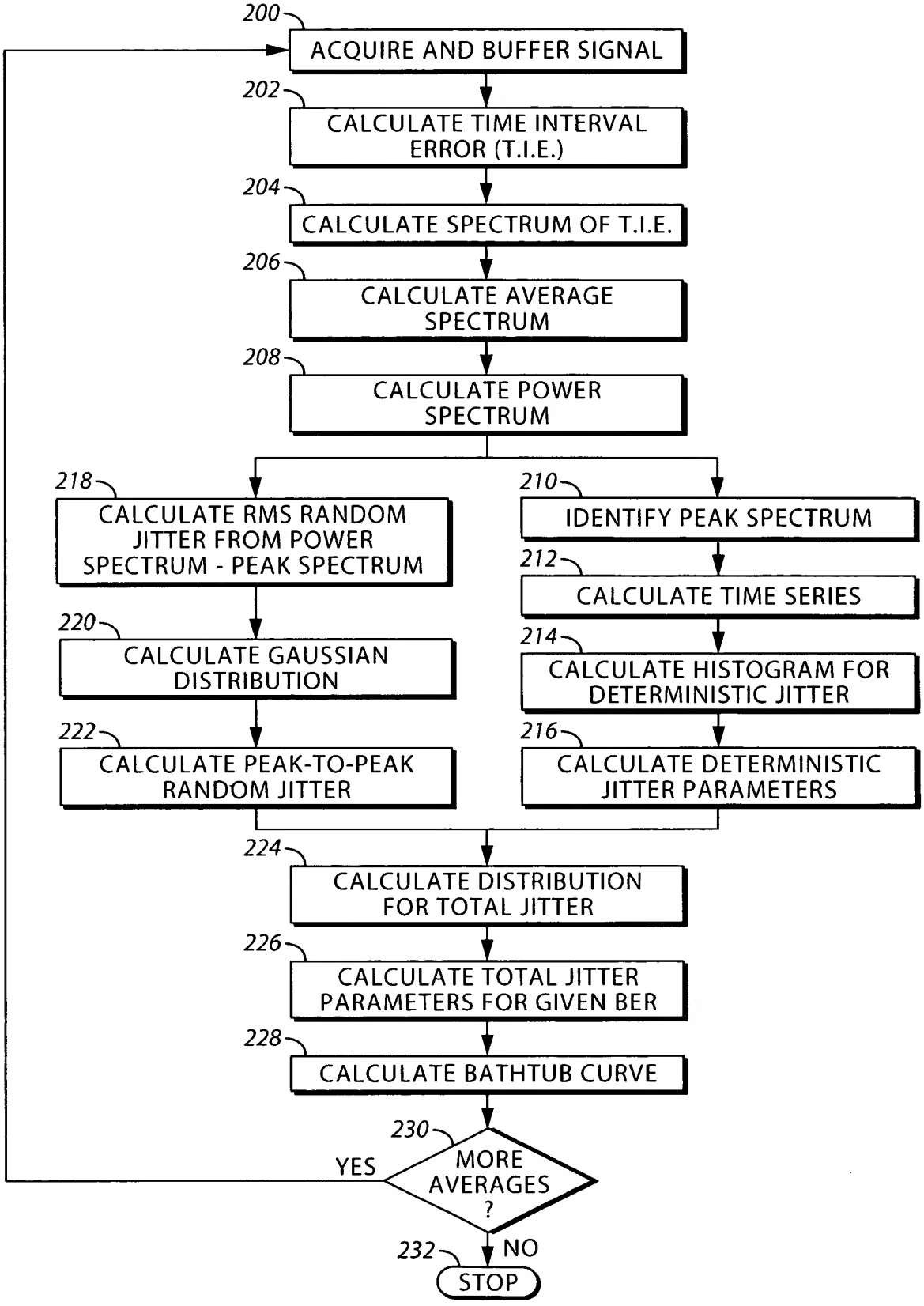
200
ACQUIRE AND BUFFER SIGNAL
202
CALCULATE TIME INTERVAL ERROR (T.I.E.)
204
CALCULATE SPECTRUM OF T.I.E.
206
CALCULATE AVERAGE SPECTRUM
208
CALCULATE POWER SPECTRUM
218
CALCULATE RMS RANDOM JITTER FROM POWER SPECTRUM - PEAK SPECTRUM
220
CALCULATE GAUSSIAN DISTRIBUTION
222
CALCULATE PEAK-TO-PEAK RANDOM JITTER
210
IDENTIFY PEAK SPECTRUM
212
CALCULATE TIME SERIES
214
CALCULATE HISTOGRAM FOR DETERMINISTIC JITTER
216
CALCULATE DETERMINISTIC JITTER PARAMETERS
224
CALCULATE DISTRIBUTION FOR TOTAL JITTER
226
CALCULATE TOTAL JITTER PARAMETERS FOR GIVEN BER
228
CALCULATE BATHTUB CURVE
230
MORE AVERAGES ?
YES
NO
232
STOP

FIG. 2

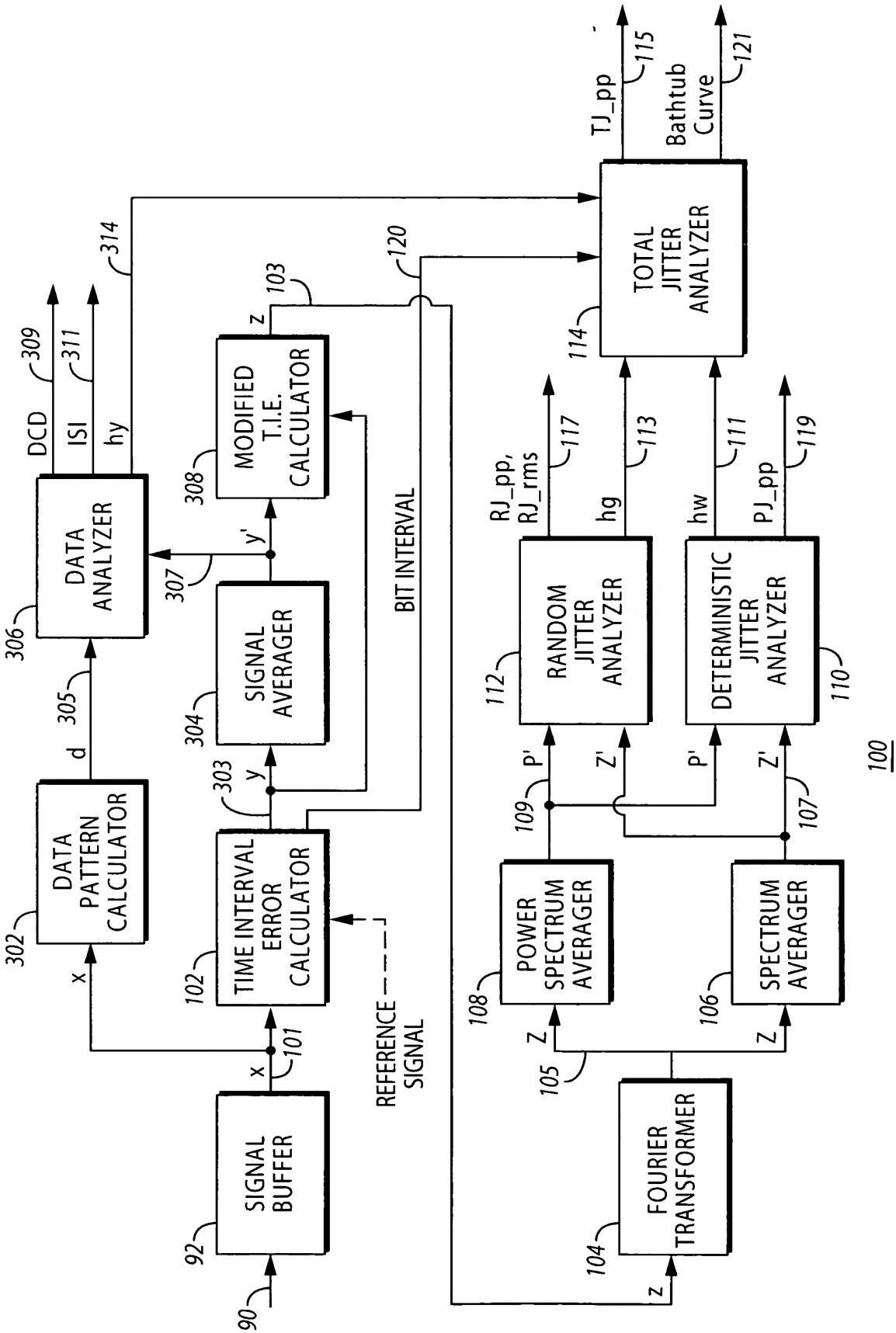
SIGNAL BUFFER
92
90
FOURIER TRANSFORMER
104
z
POWER SPECTRUM AVERAGER
108
SPECTRUM AVERAGER
106
105
Z
RANDOM JITTER ANALYZER
112
DETERMINISTIC JITTER ANALYZER
110
109
107
P'
Z'
RJ_pp, RJ_rms
117
hg
113
hw
111
PJ_pp
119
TOTAL JITTER ANALYZER
114
TJ_pp
115
Bathtub Curve
121
120
BIT INTERVAL
REFERENCE SIGNAL
TIME INTERVAL ERROR CALCULATOR
102
101
x
303
y
SIGNAL AVERAGER
304
MODIFIED T.I.E. CALCULATOR
308
103
z
y'
307
DATA PATTERN CALCULATOR
302
d
305
DATA ANALYZER
306
DCD
309
ISI
311
hy
314
100

FIG. 3

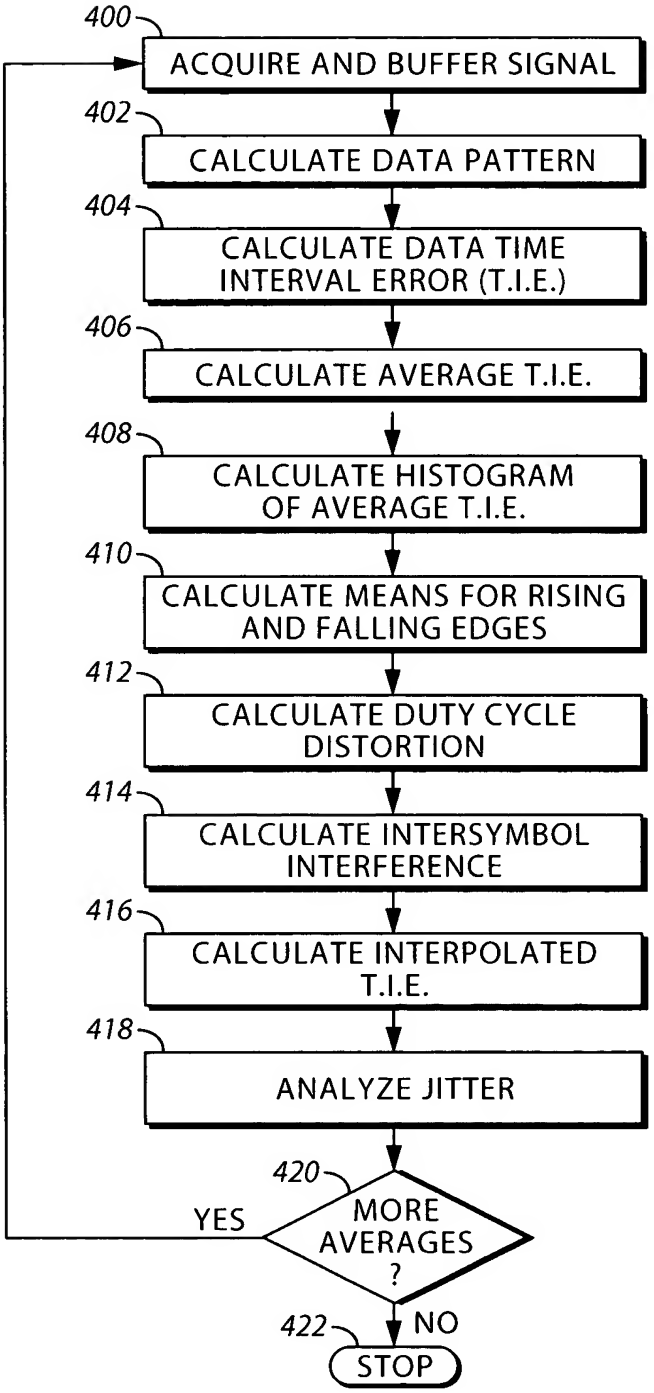
400
ACQUIRE AND BUFFER SIGNAL
402
CALCULATE DATA PATTERN
404
CALCULATE DATA TIME INTERVAL ERROR (T.I.E.)
406
CALCULATE AVERAGE T.I.E.
408
CALCULATE HISTOGRAM OF AVERAGE T.I.E.
410
CALCULATE MEANS FOR RISING AND FALLING EDGES
412
CALCULATE DUTY CYCLE DISTORTION
414
CALCULATE INTERSYMBOL INTERFERENCE
416
CALCULATE INTERPOLATED T.I.E.
418
ANALYZE JITTER
420
MORE AVERAGES ?
YES
NO
422
STOP

FIG. 4

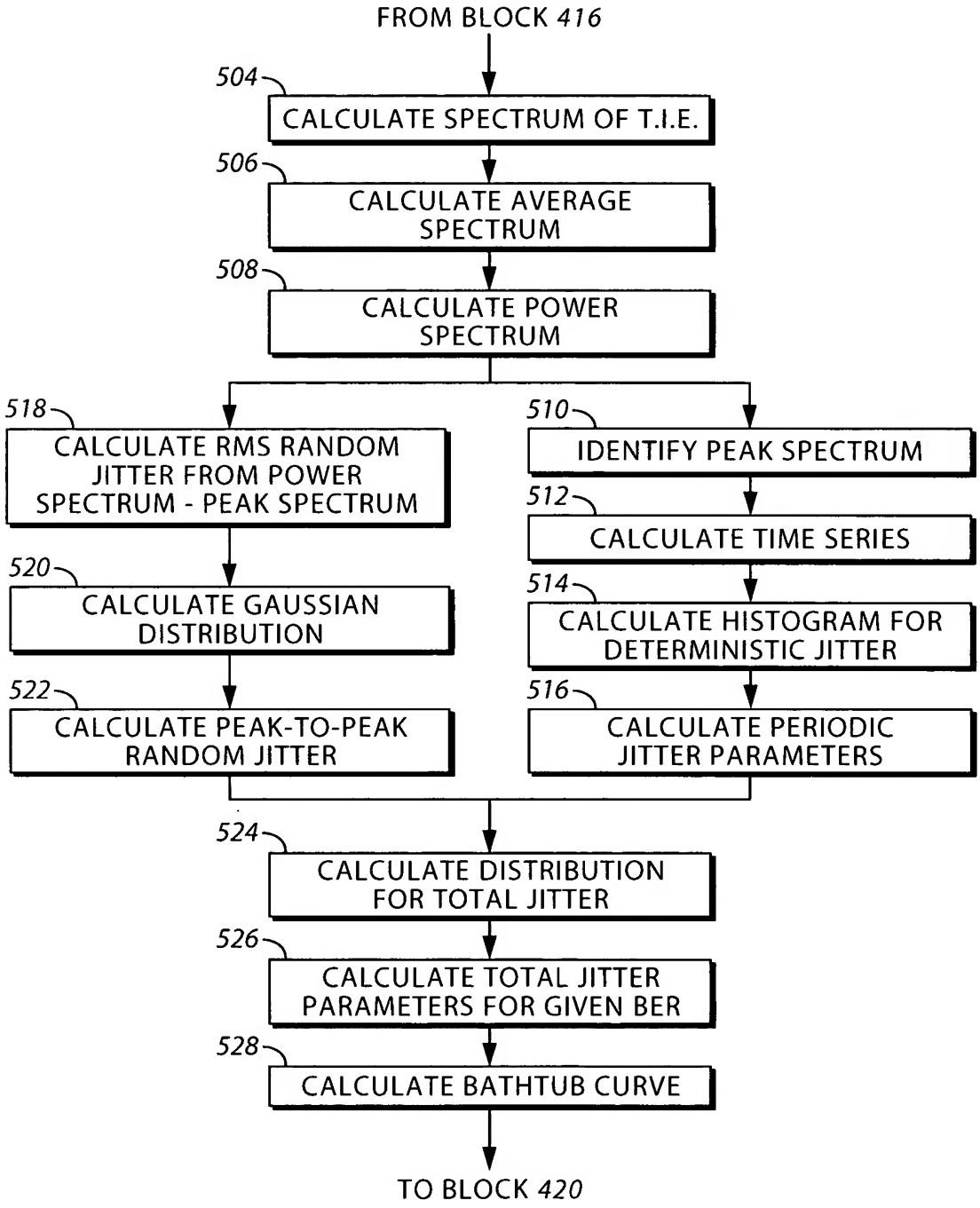
FROM BLOCK 416
504
CALCULATE SPECTRUM OF T.I.E.
506
CALCULATE AVERAGE SPECTRUM
508
CALCULATE POWER SPECTRUM
518
CALCULATE RMS RANDOM JITTER FROM POWER SPECTRUM - PEAK SPECTRUM
520
CALCULATE GAUSSIAN DISTRIBUTION
522
CALCULATE PEAK-TO-PEAK RANDOM JITTER
510
IDENTIFY PEAK SPECTRUM
512
CALCULATE TIME SERIES
514
CALCULATE HISTOGRAM FOR DETERMINISTIC JITTER
516
CALCULATE PERIODIC JITTER PARAMETERS
524
CALCULATE DISTRIBUTION FOR TOTAL JITTER
526
CALCULATE TOTAL JITTER PARAMETERS FOR GIVEN BER
528
CALCULATE BATHTUB CURVE
TO BLOCK 420

FIG. 5